

REMARKS

Claims 12-14 and 17 stand rejected under 35 USC § 103(a). In this Amendment, claim 12 is amended and new claims 18-21 are added. New claims 18-21 parallel pending claims 12-14 and 17, but make explicit the requirement that heat not be used in forming the raw rubber material into a waterproof sheet. This requirement already is stated in the preamble (“unvulcanized”) but is stated expressly in the body of the new claims.

In addition, Applicant makes the following remarks.

Claim Rejections - 35 USC § 112

Claims 12-16 are rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. Applicant has adopted the Examiner’s suggested wording to overcome to rejection. As well, claim 13 has been amended to correct a typographical error in the spelling of “formaldehyde”. No new matter has been added.

Claim Rejection — 35 USC § 103

Claims 12, 13 and 17 are rejected under 35 USC § 103(a) as being unpatentable over Draexler (4,551,392), Hoover (2,656,292) and newly-cited reference Fuji et al. (4,174,993). The rejection is respectfully traversed.

The Examiner asserts, (Office Action, page 4), that it would be obvious to determine an optimum percentage of the adhesion-providing agent by routine experimentation. As stated in the Declaration under Rule 1.132 of Mr. Dae Woo Lee (previously submitted), conventional rubber composites heretofore have contained an adhesion-providing agent in the range of 1-5%. Mr. Lee found no teaching or suggestion to employ such an elevated adhesion-providing agent ratio in either Draexler ‘392 or Hoover ‘292.

Fuji ‘993 is newly asserted by the Examiner to rebut Mr. Lee’s Declaration and asserted to teach an adhesive waterproof composition having an adhesion-providing agent at 20-200% of the weight of the rubber main material. Applicant further notes that Composition A of Fuji ‘993 is a solid composition; Compositions C and D are liquid-phase compositions. (Fuji ‘993, Table 1 ; lines 55-68.) The discussion of Fuji ‘9893 with respect to liquid-phase compositions has not been shown to teach or suggest percentages of adhesion-providing agents used in forming an unvulcanized adhesive waterproof sheet (i.e., solid-phase composition).

Composition A of Fuji '993 has an adhesion-providing agent ("tackiness promoter") of only 1-5 weight parts as compared to 100 weight parts of the rubber main material ("main polymer"). (See Fuji '993, Table 2.) The weight part corresponding to the "tackiness promoter" comprises no more than 5% of the weight of the rubber main material. Fuji '993 likewise fails to provide this teaching.

Composition B is in Fuji '993 discussed as being formed into a sheet. (See col. 3, lines 60-62; col. 4, lines 54-66.) However, Fuji '993 expressly teaches that the percentage of adhesion-providing agent ("thermoplastic synthetic resin and/or the low molecular weight polymer") is not to exceed 35% by weight or "agglomeration of the composition lowers and the defined consistency cannot be obtained." (Col. 7, lines 8-12.) Fuji '993 therefore teaches away from using an adhesion-providing agent at the percentages specified in claim 13 (i.e., "about 41% of the weight of the rubber main material"). Claim 12 and its dependent claims 13-17 therefore are allowable over the cited art.

Claim Rejection — 35 USC § 103

Claim 13 is further rejected under 35 USC § 103(a) as being unpatentable over Draexler (4,551,392), Hoover (2,656,292), Fuji et al. (4,174,993) and further in view of Koizumi et al. (4,707,528), Takaki et al. (5,049,610) and Davis et al. (5,612,141). The rejection is respectfully traversed, although it is believed moot in view of the above remarks.

Applicant reiterates the comments regarding the obviousness of determining the claimed adhesion-providing agent percentage and the teaching of Fuji '993 with regard to solid sheets compositions and the teaching-away of Fuji '993 with respect to Applicant's claimed adhesion-providing agent range.

Koizumi '528 discusses a composition that is made into sheets by vulcanization. (Koizumi '528, col. 7, lines 32-43.) The Koizumi composition therefore cannot possess the properties of the claimed invention, as vulcanization is not required to form the claimed unvulcanized waterproof sheet.

Takaki '610 likewise teaches that the "tackifier" is used at 0.5-20 weight parts (i.e., no more than 20% of the weight of the rubber main material). There is no teaching or suggestion in Takaki '610 to employ higher tackifier percentages in the composition.

Claim 13 therefore is further allowable over these combined references.

Claim Rejection — 35 USC § 103

Claim 14 is rejected under 35 USC § 103(a) as being unpatentable over Draexler (4,551,392), Hoover (2,656,292), Fuji et al. (4,174,993) and further in view of Nottebohm (2,338,960) and McCortney (2,080,730).

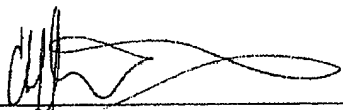
This rejection is respectfully traversed. The comments above pertaining to the asserted teachings of Fuji '993 and the obviousness of determining Applicant's claimed percentage of adhesion-providing agent are reiterated. Neither Nottebohm '960 nor McCortney '730 provide the missing teaching or suggestion to use an adhesion-providing agent having a weight of about 41% of the weight of the rubber main material in forming an unvulcanized waterproof sheet. Claim 14 therefore is allowable over the cited references as combined.

CONCLUSION

The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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